TOTTOT "S8hS7660

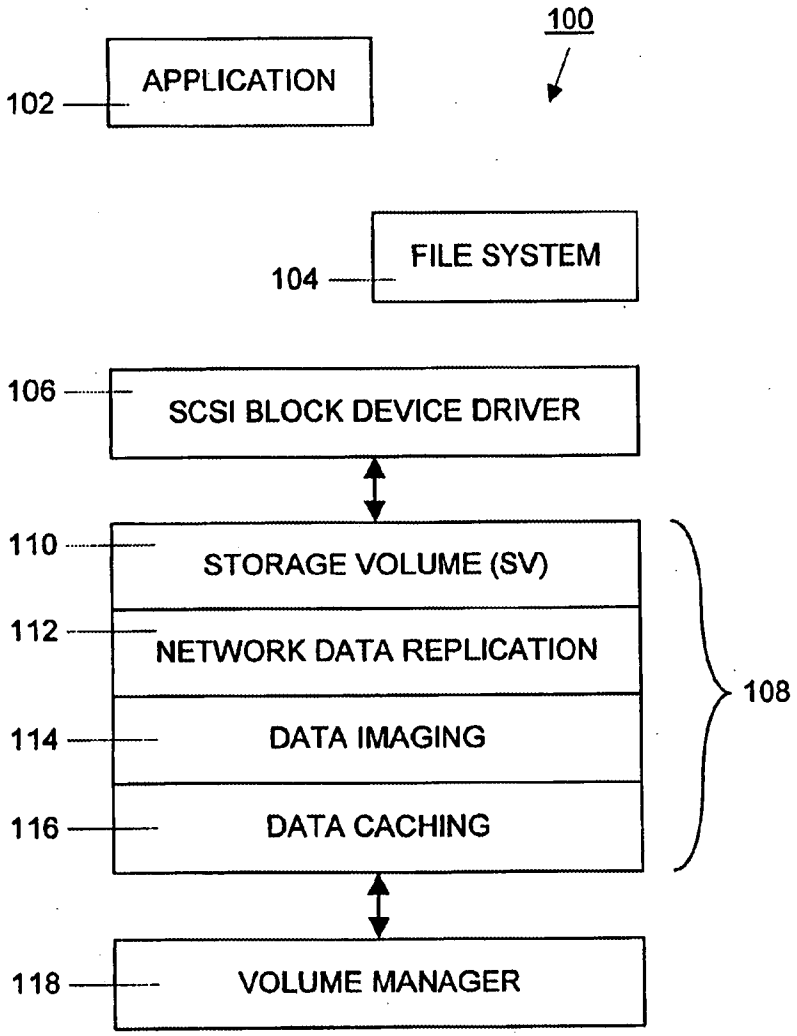

FIG. 1A

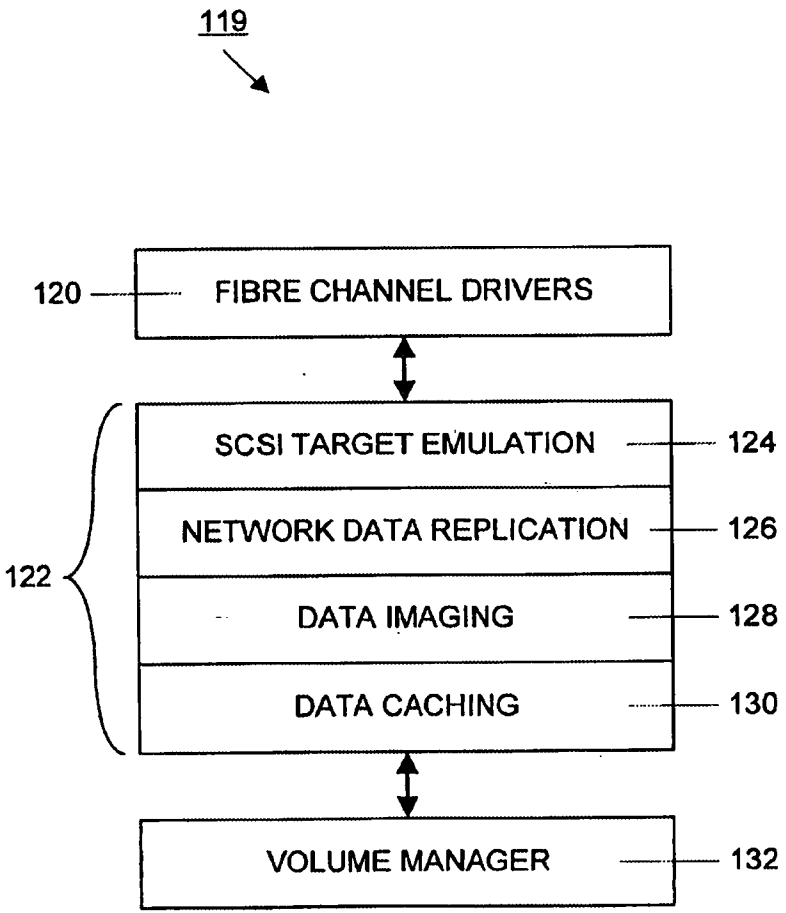

FIG. 1B

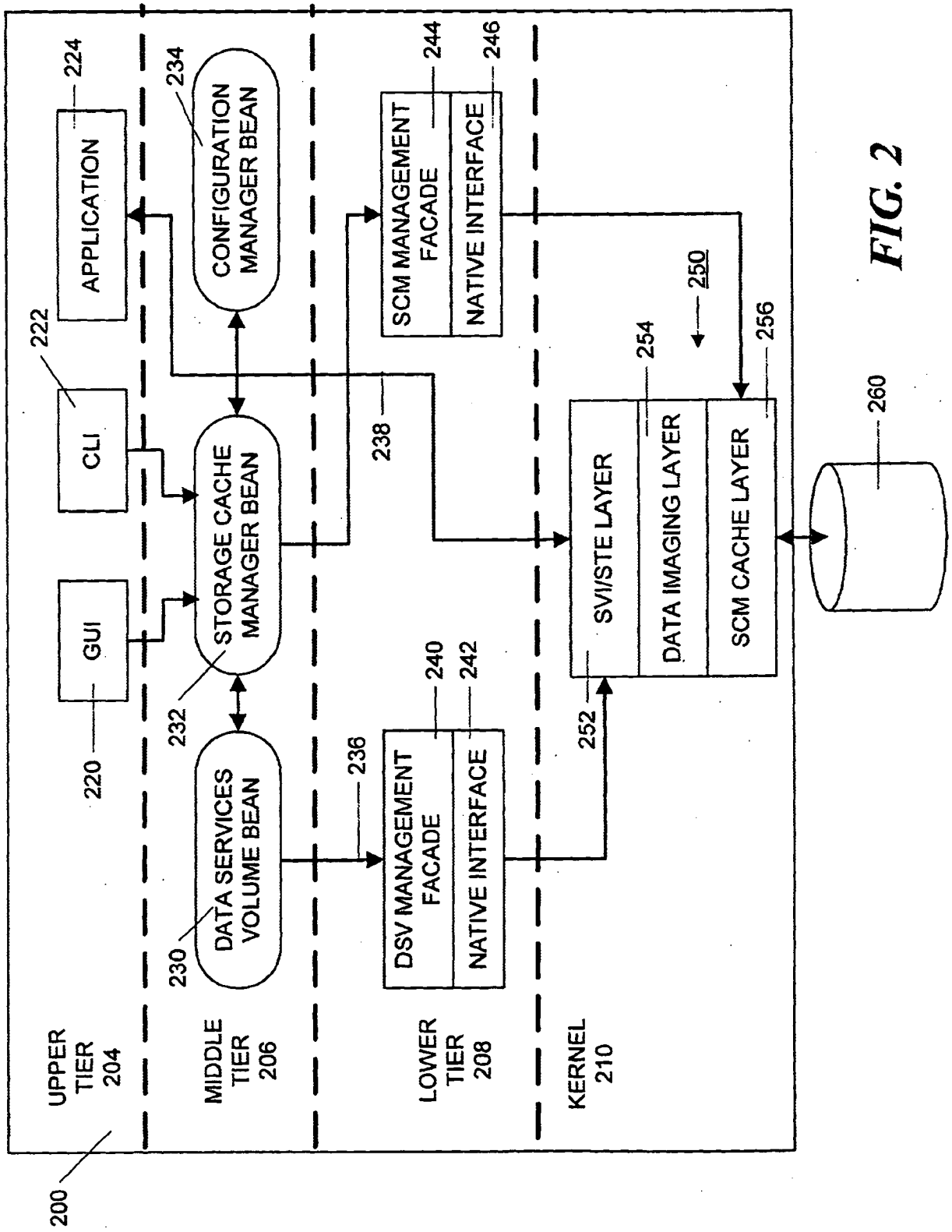
200
UPPER TIER 204
MIDDLE TIER 206
LOWER TIER 208
KERNEL 210
APPLICATION
224
CONFIGURATION MANAGER BEAN
234
CLI
222
GUI
220
STORAGE CACHE MANAGER BEAN
232
DATA SERVICES VOLUME BEAN
230
SCM MANAGEMENT FACADE
244
NATIVE INTERFACE
246
DSV MANAGEMENT FACADE
240
NATIVE INTERFACE
242
236
238
250
SVI/STE LAYER
254
DATA IMAGING LAYER
SCM CACHE LAYER
256
252
260

FIG. 2

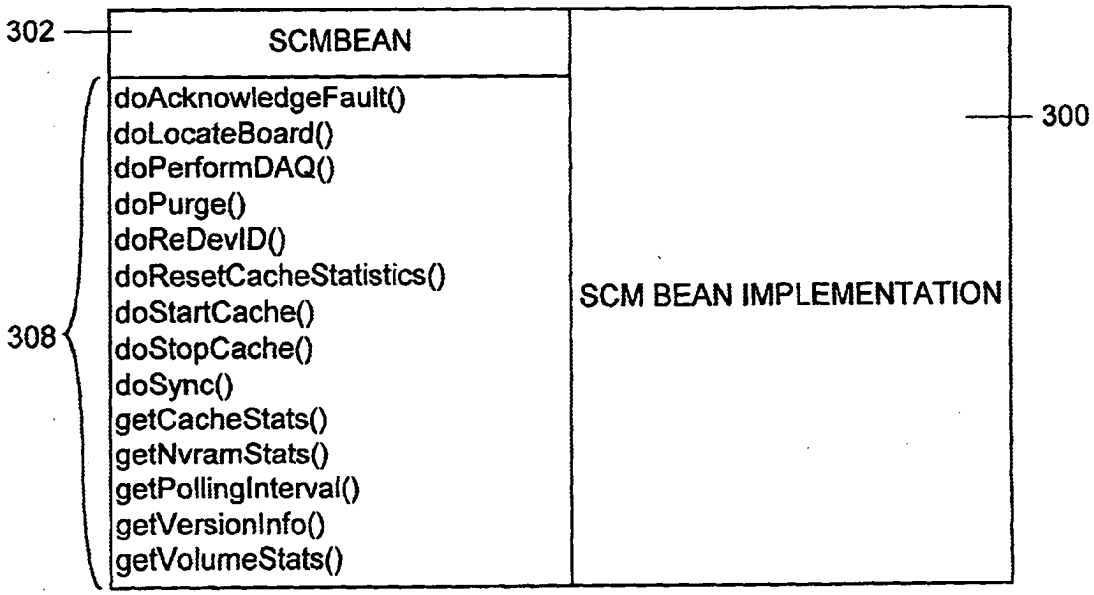
302
SCMBEAN
doAcknowledgeFault()
doLocateBoard()
doPerformDAQ()
doPurge()
doReDevID()
doResetCacheStatistics()
doStartCache()
doStopCache()
doSync()
getCacheStats()
getNvramStats()
getPollingInterval()
getVersionInfo()
getVolumeStats()
308
300
SCM BEAN IMPLEMENTATION

FIG. 3

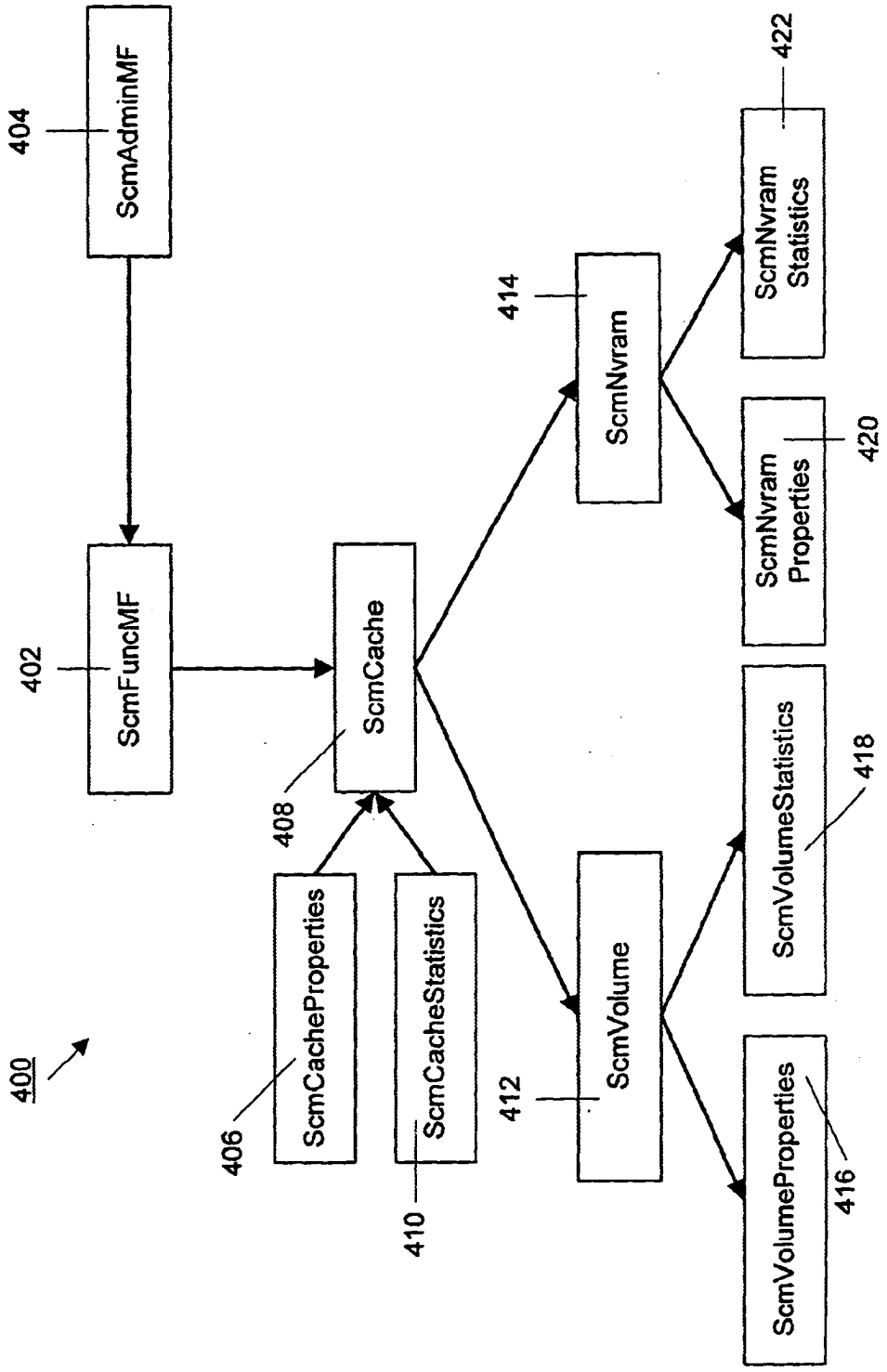
400
ScmAdminMF
404
ScmFuncMF
402
ScmCache
408
ScmCacheProperties
406
ScmCacheStatistics
410
ScmNvram
414
ScmNvram Statistics
422
ScmNvram Properties
420
ScmVolume
412
ScmVolumeStatistics
418
ScmVolumeProperties
416

FIG. 4

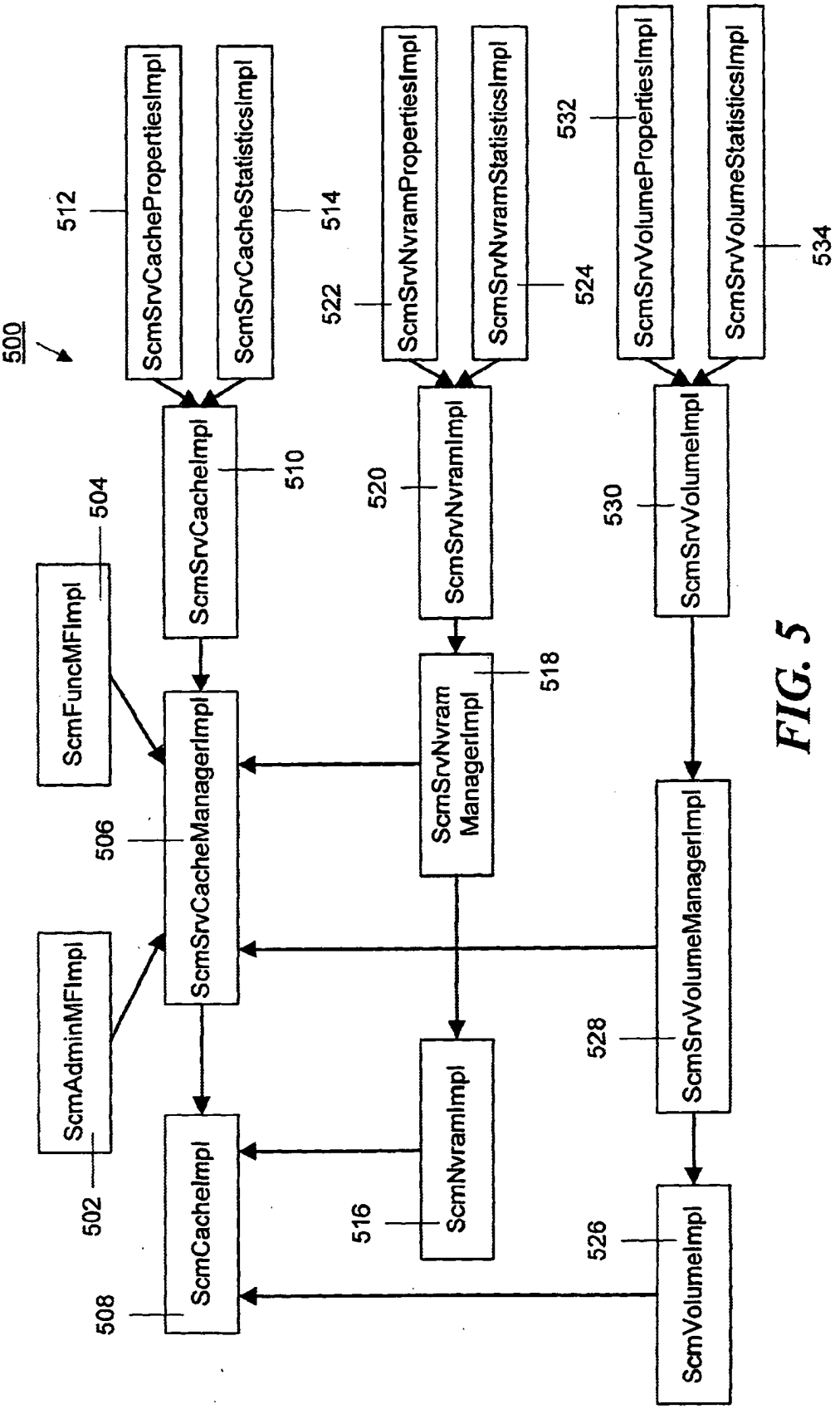
500
ScmSrvCachePropertiesImpl
512
ScmSrvCacheStatisticsImpl
514
ScmSrvNvramPropertiesImpl
522
ScmSrvNvramStatisticsImpl
524
ScmSrvVolumePropertiesImpl
532
ScmSrvVolumeStatisticsImpl
534
ScmSrvCacheImpl
510
ScmSrvNvramImpl
520
ScmSrvVolumeImpl
530
ScmFuncMFImpl
504
ScmSrvCacheManagerImpl
506
ScmSrvNvram ManagerImpl
518
ScmSrvVolumeManagerImpl
528
ScmAdminMFImpl
502
ScmCacheImpl
508
ScmNvramImpl
516
ScmVolumeImpl
526

FIG. 5

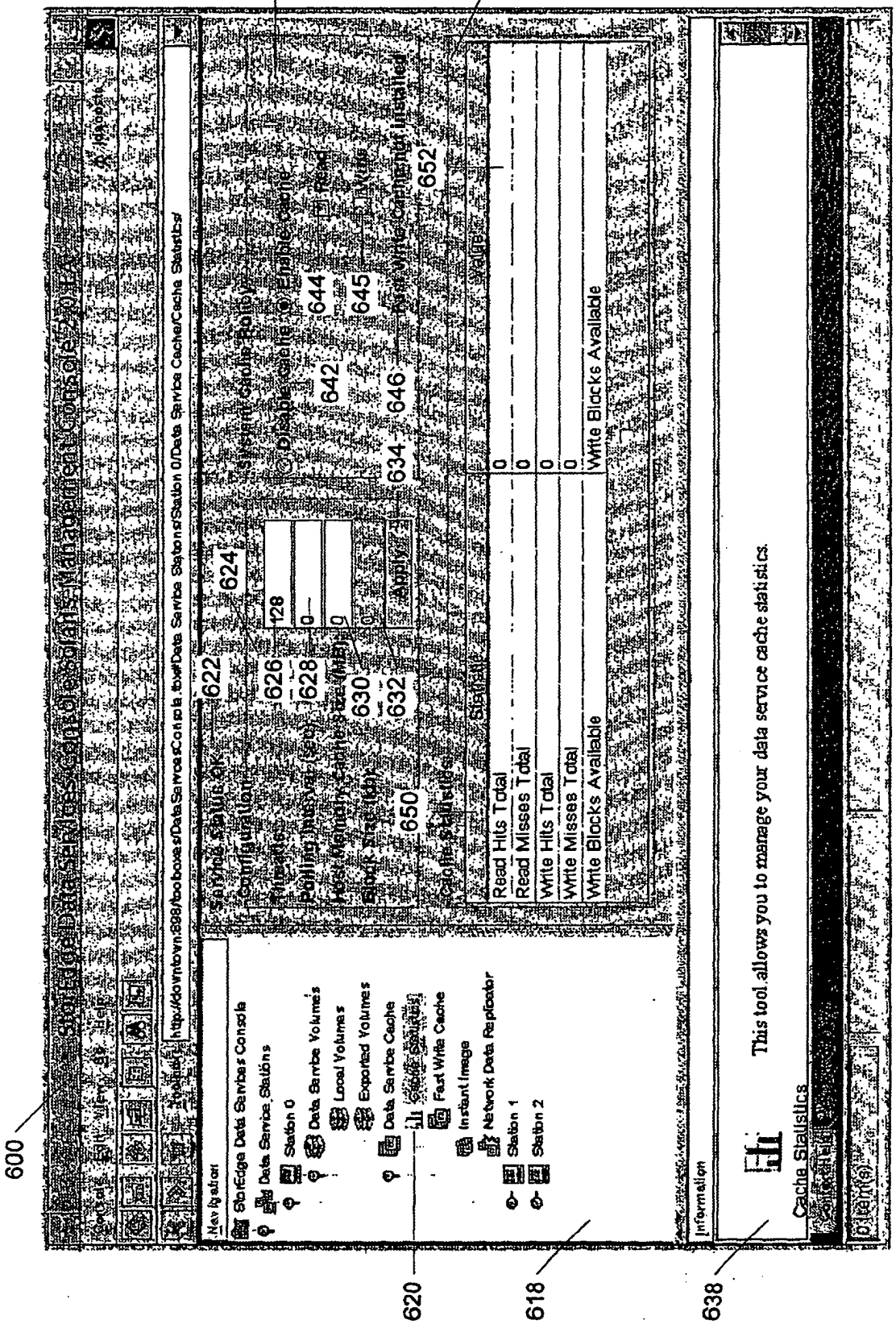

FIG. 6

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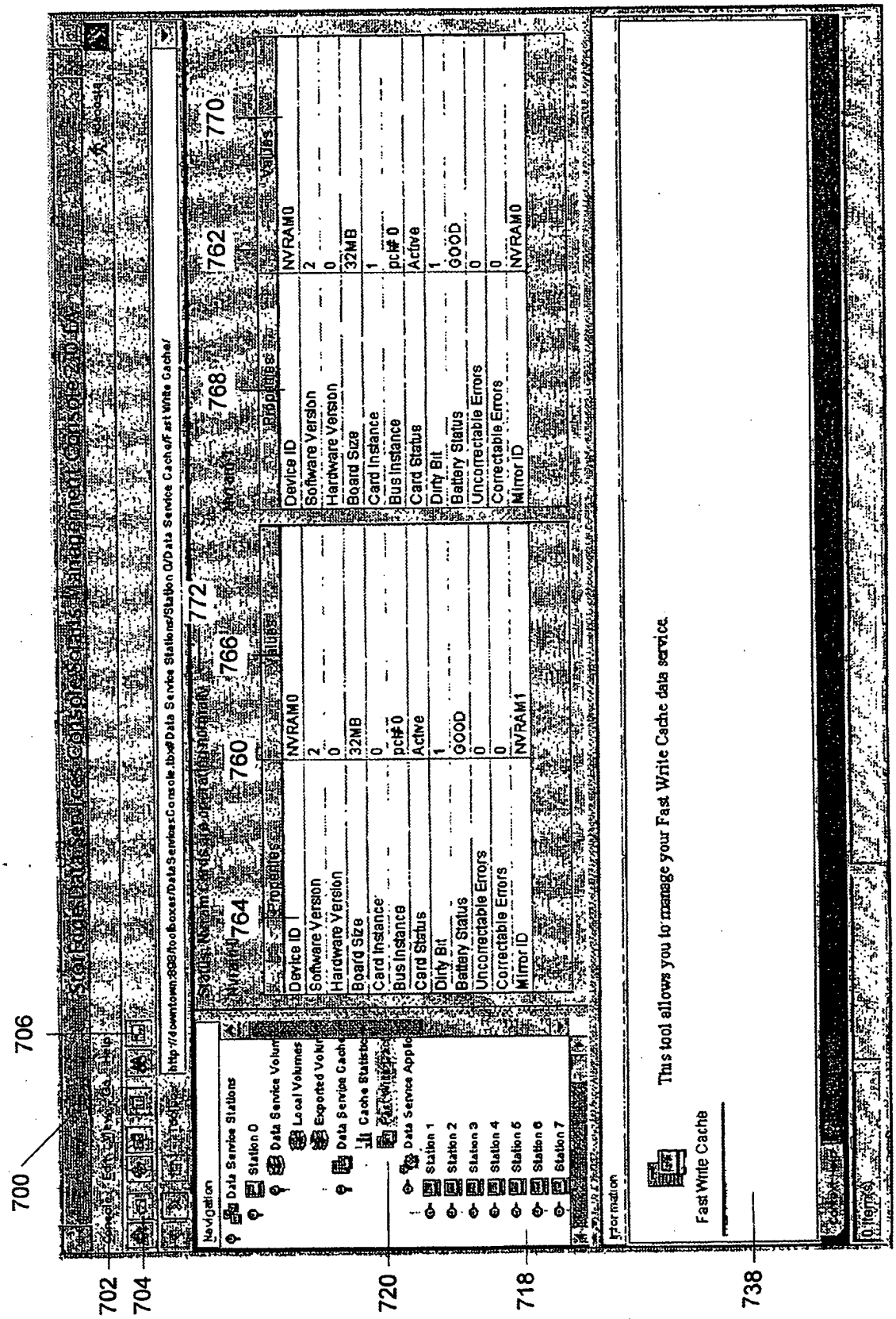
700
706
702
704
720
718
738
772
760
766
764
768
762
770
Navigation
Data Service Stations
Station 0
Station 1
Station 2
Station 3
Station 4
Station 5
Station 6
Station 7
Properties
Values
Device ID
NVRAM0
Software Version
Hardware Version
Board Size
Card Instance
Bus Instance
Card Status
Dirty Bit
Battery Status
Uncorrectable Errors
Correctable Errors
Mirror ID
NVRAM1
Information
This tool allows you to manage your Fast Write Cache data service.
Fast Write Cache

FIG. 7

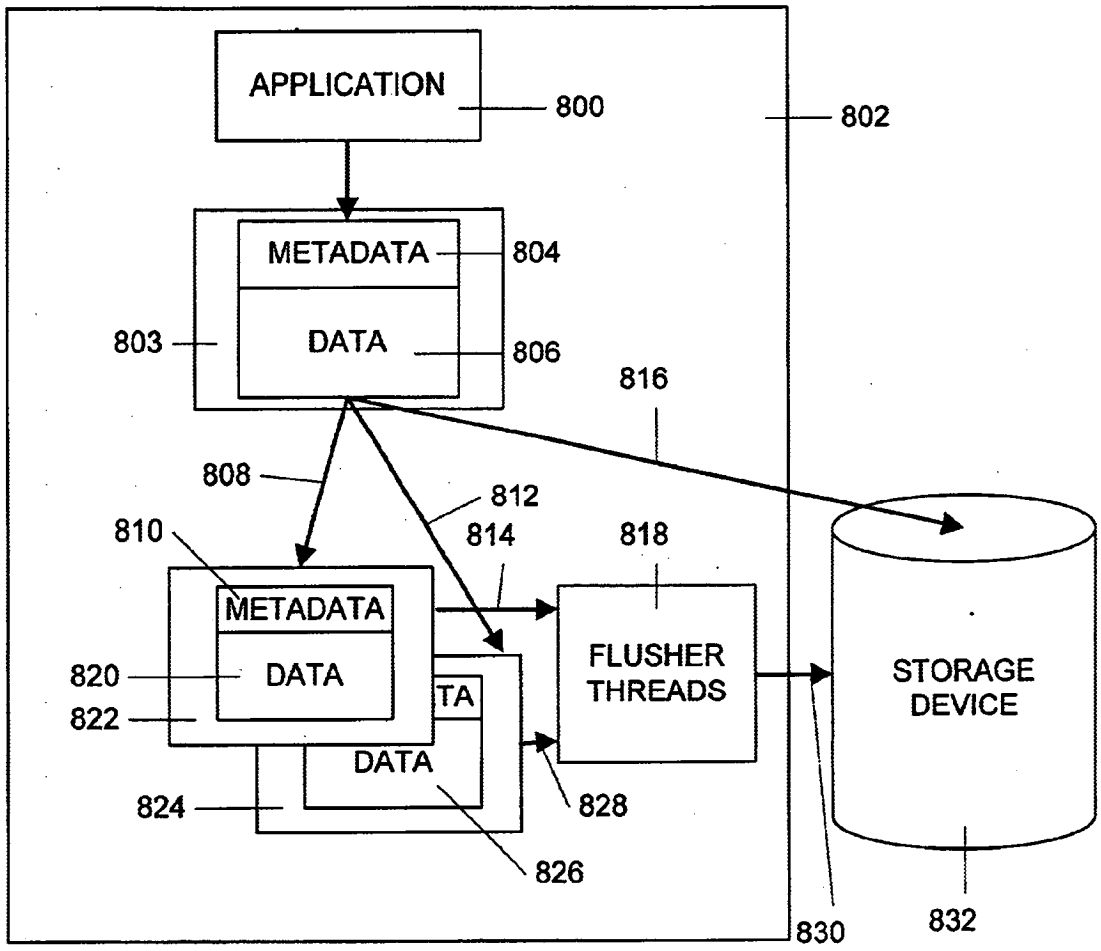
APPLICATION
800
802
METADATA
804
803
DATA
806
816
808
812
810
814
818
METADATA
820
DATA
822
TA
DATA
FLUSHER THREADS
STORAGE DEVICE
824
828
826
830
832

FIG. 8

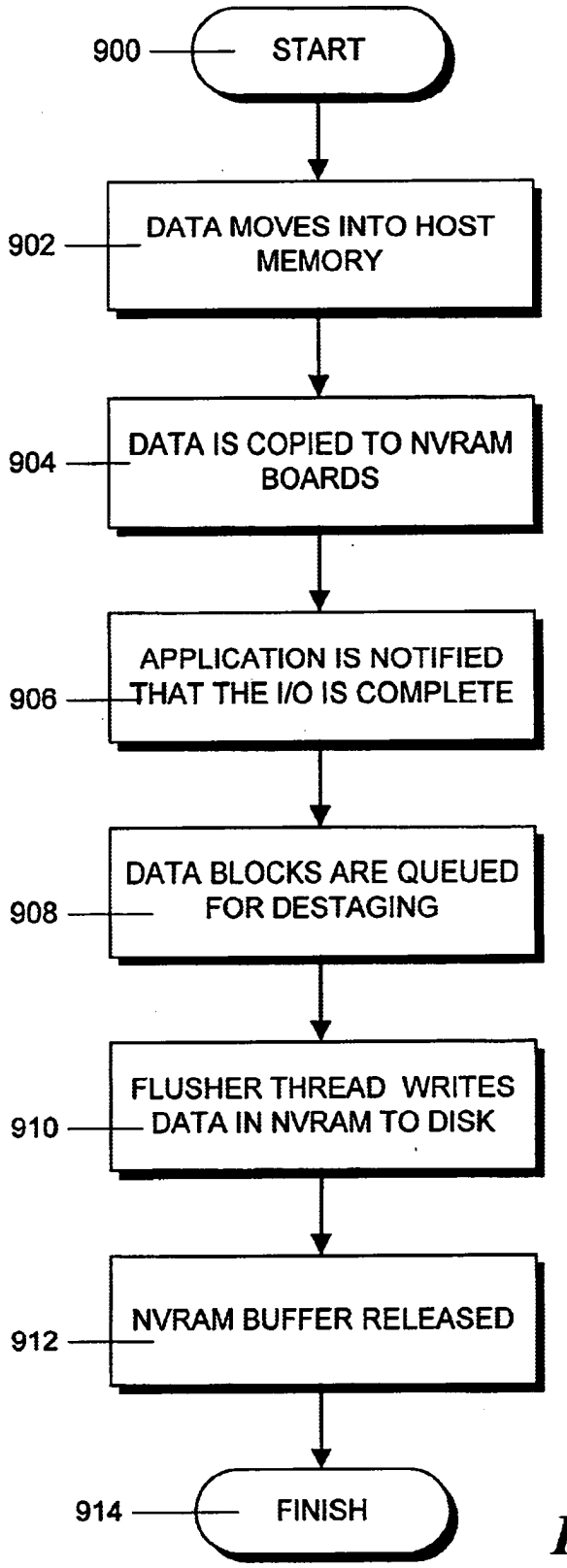
900
START
902
DATA MOVES INTO HOST MEMORY
904
DATA IS COPIED TO NVRAM BOARDS
906
APPLICATION IS NOTIFIED THAT THE I/O IS COMPLETE
908
DATA BLOCKS ARE QUEUED FOR DESTAGING
910
FLUSHER THREAD WRITES DATA IN NVRAM TO DISK
912
NVRAM BUFFER RELEASED
914
FINISH

FIG. 9

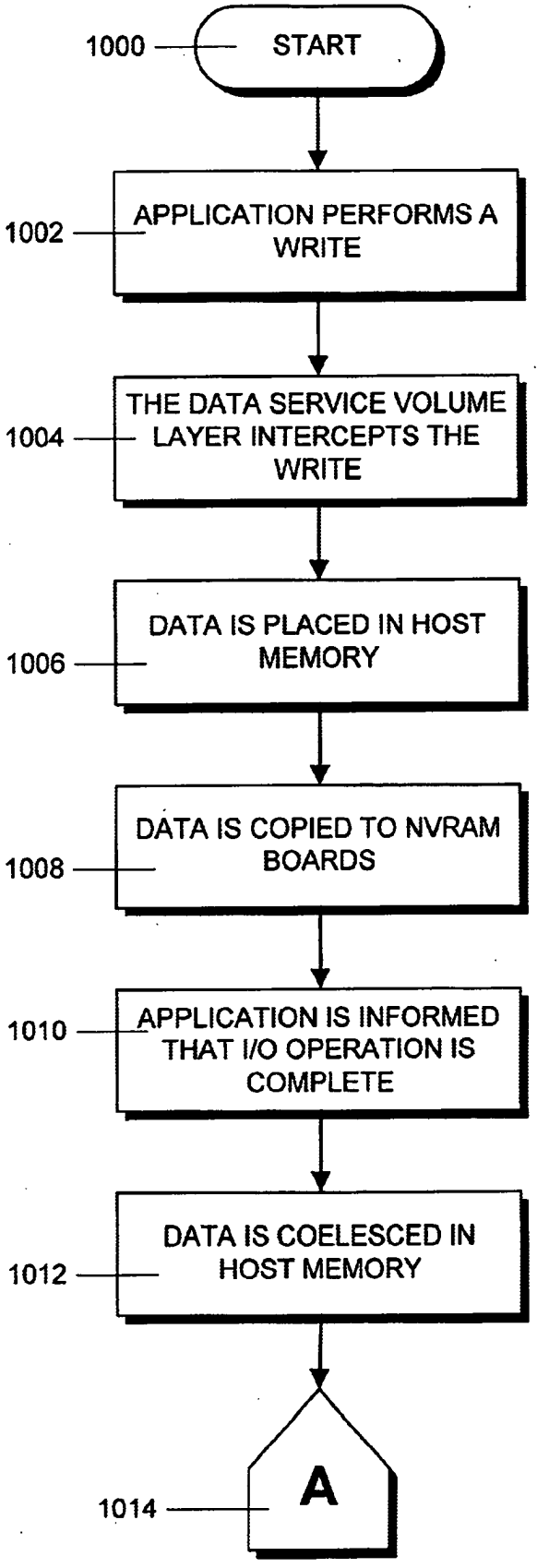
1000
START
1002
APPLICATION PERFORMS A WRITE
1004
THE DATA SERVICE VOLUME LAYER INTERCEPTS THE WRITE
1006
DATA IS PLACED IN HOST MEMORY
1008
DATA IS COPIED TO NVRAM BOARDS
1010
APPLICATION IS INFORMED THAT I/O OPERATION IS COMPLETE
1012
DATA IS COELESCED IN HOST MEMORY
1014
A

FIG. 10A

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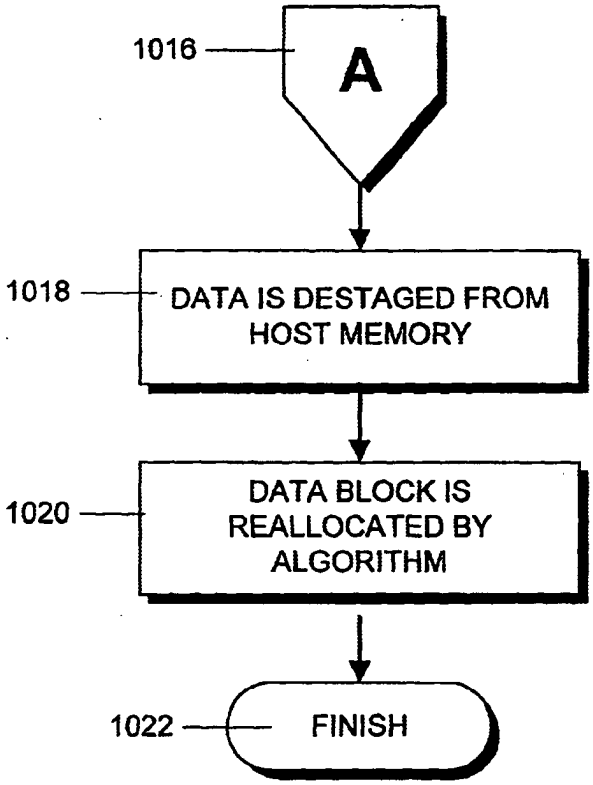

FIG. 10B

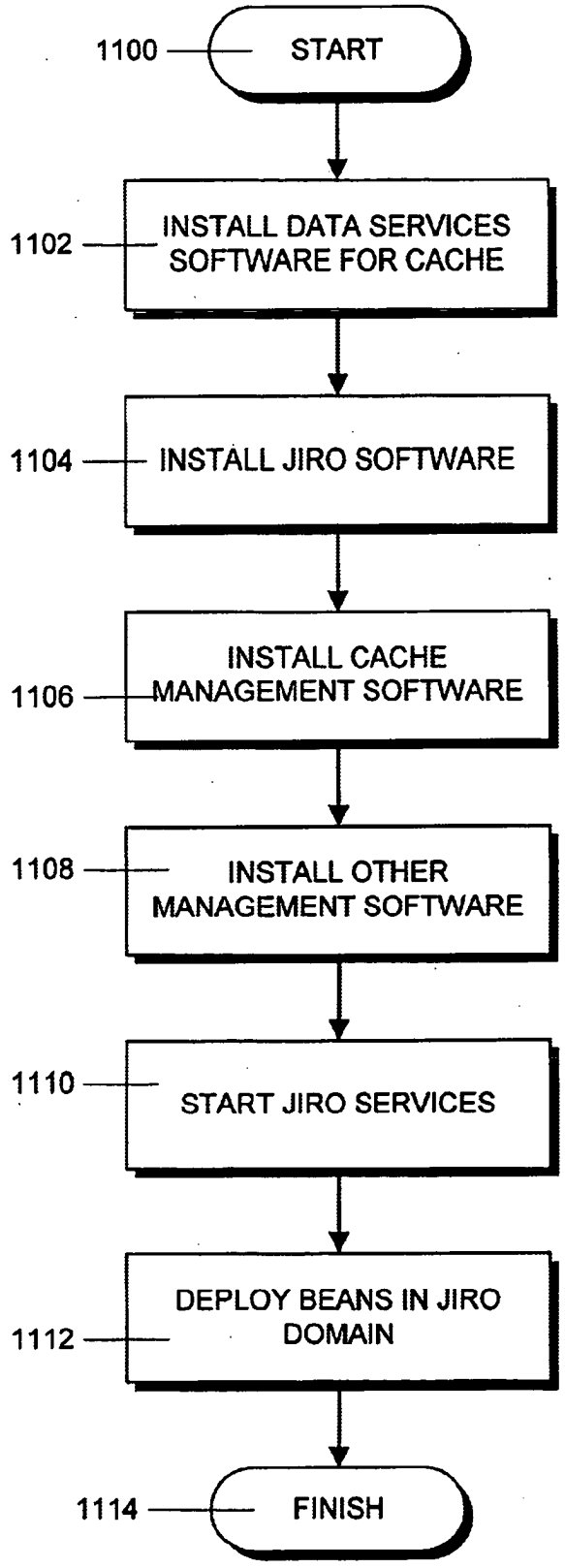
1100
START
1102
INSTALL DATA SERVICES SOFTWARE FOR CACHE
1104
INSTALL JIRO SOFTWARE
1106
INSTALL CACHE MANAGEMENT SOFTWARE
1108
INSTALL OTHER MANAGEMENT SOFTWARE
1110
START JIRO SERVICES
1112
DEPLOY BEANS IN JIRO DOMAIN
1114
FINISH

FIG. 11

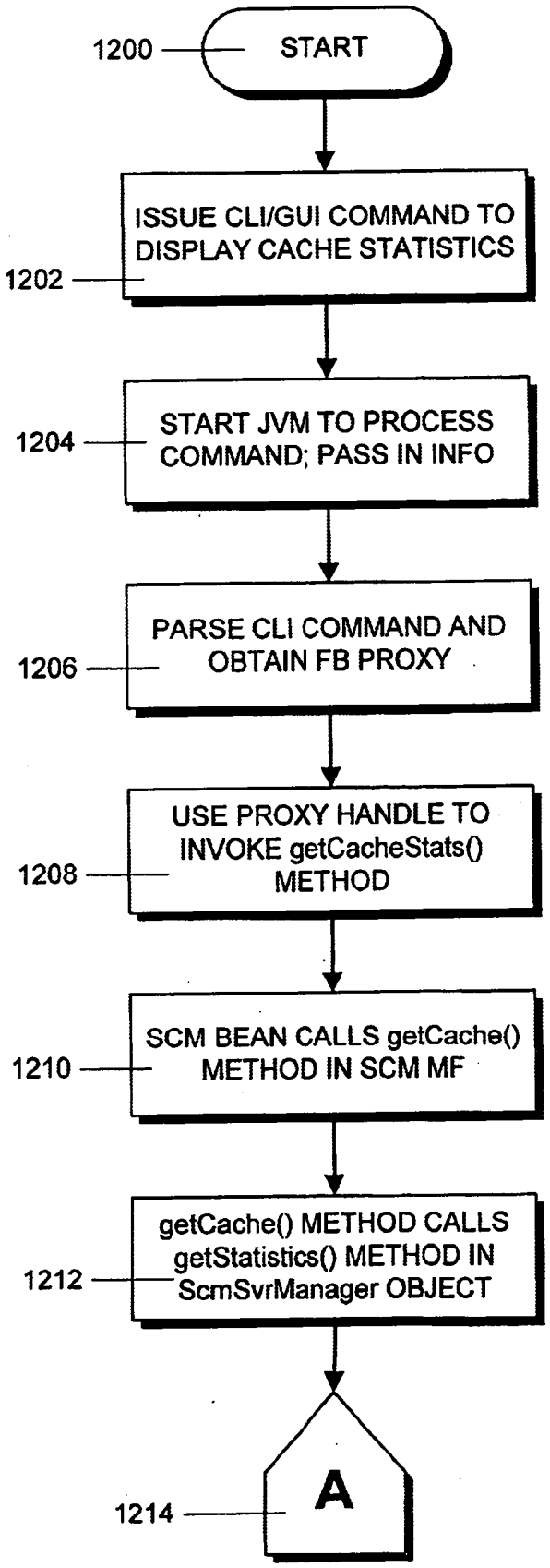

FIG. 12A

10021127-082502

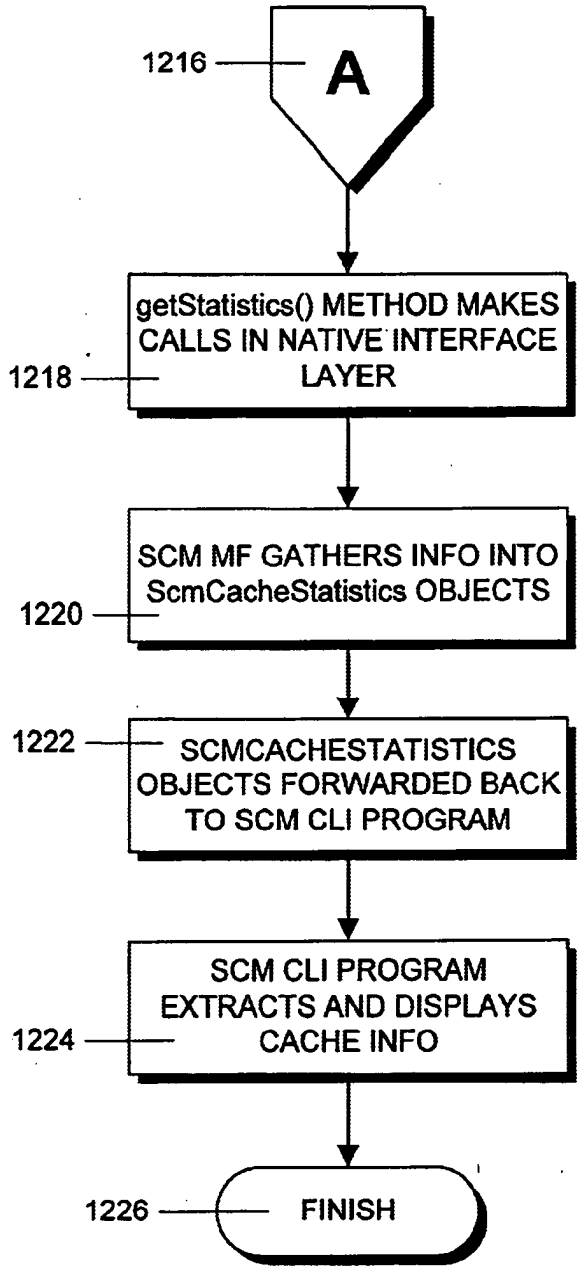
1216
A
getStatistics() METHOD MAKES CALLS IN NATIVE INTERFACE LAYER
1218
SCM MF GATHERS INFO INTO ScmCacheStatistics OBJECTS
1220
1222
SCMCACHESTATISTICS OBJECTS FORWARDED BACK TO SCM CLI PROGRAM
SCM CLI PROGRAM EXTRACTS AND DISPLAYS CACHE INFO
1224
1226
FINISH

FIG. 12B